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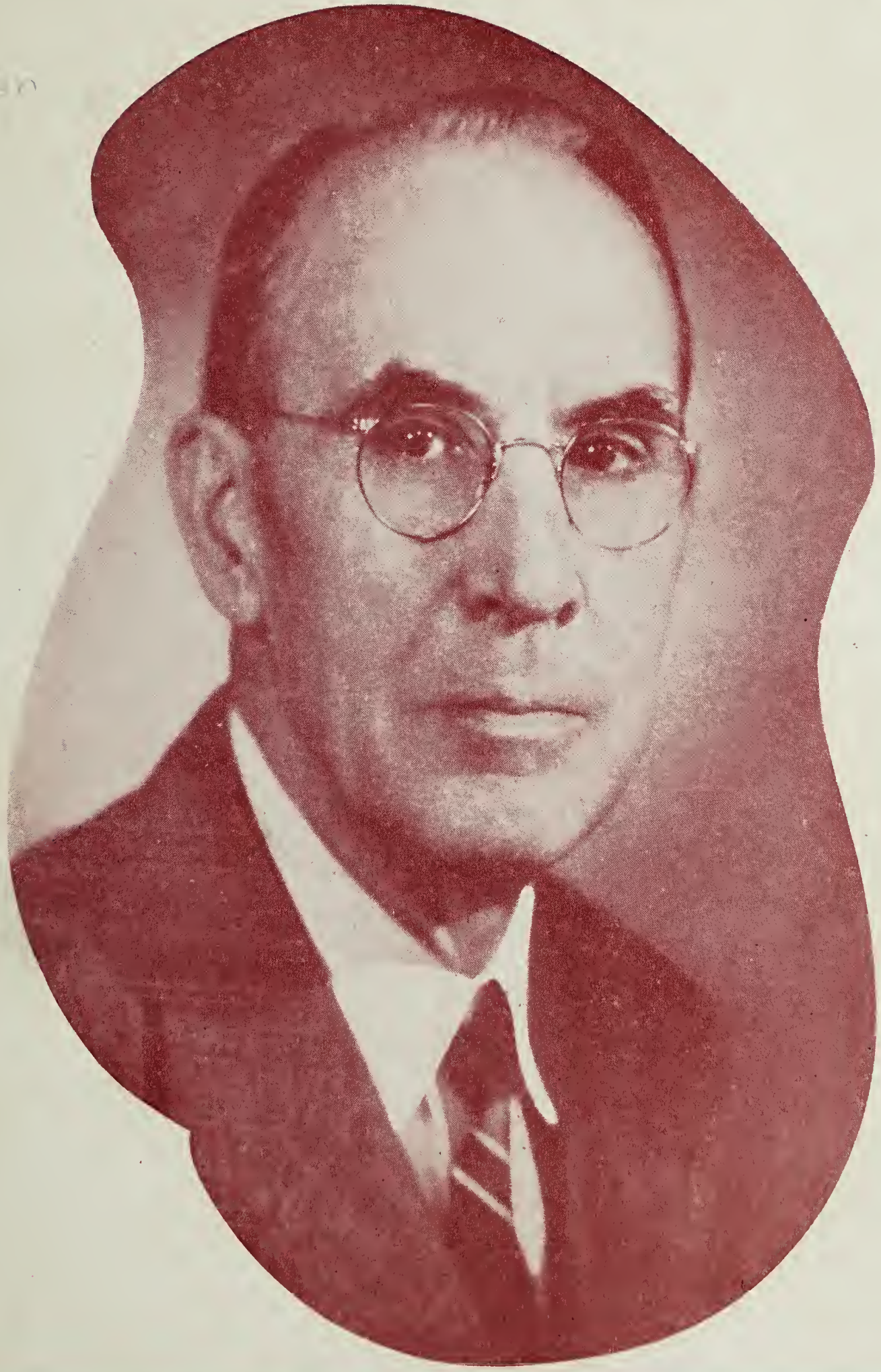

Missionary of the Microscope

DUMAGUETE-2

THIS PAMPHLET is a reprint of one of the chapters in the book, "New Frontiers for Old" which is obtainable for $.60 from the Board of Foreign Missions. It tells of the work of Mr. and Mrs. ~~John~~ James Chapman of Silliman University in our Friendship Frontiers station at Dumaguete, Philippine Islands.

There are 7,000 islands in the Philippines, "Pearl of the Orient Seas." Beautiful Dumaguete is on one of the southern islands, Oriental Negros. It is famous as the home of Silliman University, the great Protestant school of the island, which has furnished so many of the nation's leaders. Though badly shattered by the war, Silliman reopened within two months after liberation.

Missionary of the Microscope

By ROSALIE EDWARDS HOOPER

College traditions are many but none are more delightful than the one that Silliman University has cherished from its earliest years. Whether ships arrived at Dumaguete at midday or at midnight with incoming or outgoing faculty members, the residents of the campus waved cheery greetings or farewells to those who looked with longing eyes over the tropical palm-colored scene. It was with peculiar joy that the group awaited the ship on November 19, 1916, for a new missionary family was coming! That was always a red-letter day for such a rapidly expanding institution but this family brought the fulfillment of a cherished dream that the Science Department was to be reinforced by the addition of a splendidly trained man for its head. When Dr. and Mrs. James Chapman with Katherine and James R. went ashore in Dumaguete they were royally welcomed and their lives and abilities were entwined with Silliman's campus from that hour. A large service awaited both of them for Mrs. Chapman became an invaluable part of the college life as full professor in English, although her home was a busy one with young John coming to make a happy trio for her household.

The hand of destiny had been clearly apparent in the life of James Chapman. His keen powers of observation of later years had their inception in his out-of-door experiences on an Ohio farm. Animals, insects, trees, and flowers familiarized him with all that surrounded him. No better training school could he have had than these farm years. He was building in his youth, physical strength, for ardu-

ous tasks and trying circumstances that would later demand endurance. To these needed qualities was added that "better part" of a deeply religious heritage from his parents whose sincerity was attested by precept and example. Roads could not be too muddy, neither heat nor cold too trying for the Chapman family to remain away from the country church one mile distant. The lad was receiving a background that was to be the rock foundation on which sterling character was to be built. The warm-hearted neighborliness in illness and other difficulties of this community became an asset that continued in adulthood. In his early teens he was teaching in the Sunday school and working in other church responsibilities.

Sturdy in body, alert in mind and sincerely religious in spirit, he entered Park College and the message of that institution brought a challenge to personal surrender that resulted in church membership. It crystallized his desire to serve and he became a member of the Student Volunteer Band. Many missionaries, who spoke at Park, stirred his heart as they told of work for Christ in other lands. Later he was led into deputation work and became the president of the Missouri State Student Volunteer Movement and he was chosen as a student elder of the college church. The work program widened his circle of friends for students were brought closely together, their fidelity tested and responsibility developed. His eager searching mind reacted to the stimulating, educational opportunities, and he went far beyond the actual requirements.

Early his school record revealed great ability in scientific lines. The year following his graduation, one of the science professors was having his Sabbatical leave and Mr. Chapman was chosen to fill his place. Also, that year

1908 marked the achievement of his M.A. degree. The desire to go further in this scientific quest led him to Harvard where three years later he attained his academic goal of Doctor of Science. During this time his teaching experience was growing through Student Assistant's work in Harvard in the field of zoology and at Tufts College in biology for two years each. Through these years he was leaving a deep impression of thorough scholarship and personal integrity. In this period of demanding graduate study he was active in boys' club work and faithful in church activities. While in Boston he married a Park College friend, Miss Ethel Robinson, a daughter of the manse, and a sister of Dr. Harold McAfee Robinson. She was one of the McAfee family whose contribution for generations to the Kingdom has been unexcelled. Her rare intellectual ability and charm of personality made her an exceedingly useful member of this splendid team. His experience continued as entomologist for the City of Boston from 1911-1914 and for two subsequent years of service under the United States Department of Agriculture.

Posts in mission schools in China and India had been offered to him in physics or chemistry but not in his field of biology. How frequently one's life work is discovered through a need or the call of a friend! Dr. Chapman's came through both. Silliman needed a strong man to head its Science Department and one of the teachers of that department was home on furlough. When Dr. Chapman came for an interview with the Philippine Secretary his appointment was unique. This promising Harvard-trained United States agricultural expert was so surely the man for the position that he was definitely accepted that day before candidate blanks had been sent to him, or the Board had followed its usual procedure of appointment.

The change was amazingly rapid for one to whom this country offered so many challenges. Connections were severed, personal possessions were packed, and over the rolling Pacific the Chapman family entered their new life. His scientific friends hailed his going with great joy for the next best thing to going amid the teeming insect life of the tropics was to have a friend who would collect for them. Missionaries frequently do many things outside their regular field, and Dr. Chapman was no exception, for he taught physics and chemistry as well as his chosen biology during his first years. One will readily see through his eyes the story of a Science Department growing at Silliman which may not be unlike the experience of other mission schools.

"Many no doubt will be interested to learn about the growth of the Department of Science at Silliman. Let me assure you it had a modest beginning. Prior to 1909 the cradle of biology was rocked by Dr. Hibbard along with his other arduous duties as President of the then-infant institution. The equipment of this branch of science consisted of one microscope given by Mr. Glunz, and won by his brother some thirty years before for one new subscription to the Youth's Companion and twenty-five cents additional. There were no reference books and the texts were written before the seventies. The classes had no definite place of meeting but wandered from place to place as vacant room could be found.

"Mr. Glunz rocked the physics cradle. This science had some half dozen students in the beginning and met at one end of the large table in Dr. Hibbard's sitting room. Later it occupied a small nipa structure near the beach. The equipment was meager and much extemporizing of apparatus was necessary as will be seen from the following

related by one of the students of that day. 'In studying falling bodies one of us had to climb up in the interior of the building near the roof and drop a stone while the other members of the class made observations.'

"Mr. Eskridge came to Silliman during the spring of 1910. He was asked to come and take charge of the biological work and see what could be done to stimulate its growth. When he arrived he found the microscope mentioned above and a specimen of Ottacus caterpillar in a pickle jar the sole specimen of the Department. A room known as '*old four*' 18 x 30 ft. which up to this time had been used as temporary headquarters for biology was set aside for the exclusive use of science. The microscope and specimen found a permanent home where they were soon joined by the physics apparatus.

"The chemistry cradle was first rocked by Dr. Langheim in *old four* but he soon moved it to the old hospital where he could give it the required nursing and own personal supervision.

"During the school year of 1910-1911 ten new Bausch and Lomb Compound microscopes arrived from the United States and the science biology left its cradle and began to toddle about and make its presence felt throughout the school. These two branches of science soon outgrew this room and overflowed into the halls. Those interested in its growth saw the necessity of having a separate building to accommodate them. The new structure was obtained during 1914 in the form of the new laboratory, now the engineering building, a concrete one-story structure, 30 x 50 ft. The biology and physics classes were moved to this new building where they were joined by the chemistry division, which up to this time had improved

considerably. New physical apparatus were added each year and a fair supply of chemicals were obtained.

"We have been abundantly blessed in being provided with the science building. But the building is not the only thing needed. We must have laboratory equipment. Our income is not sufficient to supply our wants. The laboratory is the workshop of science. The tools are the books and apparatus. A list of much needed apparatus is appended. We hope kind friends interested in science may be able to supply much of the needed apparatus. It is not for show but for growth. And grow we will if we get it."

His ability as scientist and organizer was manifested in departmentalizing and this was such a successful venture that it led to other adjustments in college courses that eventually gave university status to the then Silliman Institute. Students were trained in classrooms and field expeditions to see their rare opportunities and were led along lines of independent observation and exercise of judgment. Medical students had significant preparation in this laboratory. The depth of interest of Dr. Chapman in his students was evidenced not only in his classroom periods, but, also, personal interviews aided them in finding their way out of a maze of conflicting opinions through the scientific approach. It has been frequently mentioned that his students were able to meet problems of advanced study with Christian faith unshaken.

A friend of an earlier period had said of him, "He is eagerly planning to use his scientific knowledge in the widest possible way for the good of humanity. He is a very careful student and thinker but he loves humanity more." How well this was demonstrated as his missionary life proceeded. As Sunday school superintendent, Church

elder, and Bible teacher in regular curriculum, he shared in the church life of the campus but in no place did his witness tell more definitely than in his large Bible class on Sundays, on a voluntary basis, which was composed of the finest scientific students in the college who daily sat at his feet in the laboratory. The deep confidence and faith in his practicing the life of Christ brought him into close relationship as a friend with the young life about him. The establishment of the Church of Christ in the Philippines was deeply written in his heart. When he visited the noted rural Guihulngan area, he was so impressed with the challenge of that amazing Church that he wrote: "I came back wishing that I were a dozen individuals instead of just one and could do fifty jobs instead of one."

Silliman evidenced her deep appreciation for him in his selection as Executive Vice-President and Dean of the Graduate School of Education. The University of the Philippines and other institutions praised the work that Dr. Chapman was doing in making science live in these Islands. His renown was further indicated when he was selected as one of three scientists to accompany General Parker, of the United States Army, on an exploring expedition to survey and study a new mountain and lake, discovered at Southern Cotabato, Mindanao, the largest island archipelago. Planes flew from Manila to take the party to a location fourteen hours from the lake by horse and on foot.

No wonder that his scientific friends were delighted that he would collect for them, for what a collector he has been! For thirty years, he has sent materials to universities all over the United States and to foreign countries. Plants, mosses, shells, and insects of all kinds have left a tropical

land to find a resting place on the shelf of some far-away institution. Fish have gone from their sky-blue water and twenty-two new specimens are in the Natural History Museum of Leland Stanford, Harvard, and other universities.

Ants became his specialty. Today, Dr. Chapman's collection is the largest in the Orient. Even through the ravages of war, it has been reported safe in its evacuation hideaway. Only 76 species had been reported from the Philippines; now there are over 500 and almost 150 are new, not only to the Philippines but to science. One of his special fields has been blind ants, which are related to the driver-ants of Africa and he has made an extensive study of the camp followers, flies, beetles, mites, coach walks, which live and travel with the blind ants. Many of these have been identified as new species. Not only did he share most generously his rare findings with scientists in other lands, but he built up a fine department at Silliman. With the aid of his loyal colleagues, he established a fine collection of birds of the Philippines, skeletons, a teaching herbarium, biological specimens, microscopic slides and laboratory equipment, lantern slides, shells, preserved specimens of beast, bird, and fish. This museum of Natural History is the best, outside of Manila. There is also an excellent scientific library including reports, bulletins, journals, and books. Dr. Chapman had to leave behind him a "Check List of Ants of the Orient," including more than 5,000 species, and "Ecology of Genus Aenictus," which were both ready for the printer when the evacuation came and there is uncertainty about their safety. A number of articles and papers had been published at an earlier date.

Namesakes? Oh, yes, a man like Dr. Chapman would

have many. However, some of his are of queer varieties. An eel, safely residing in the Museum at Stanford, bears the name of Chapman; ants and spiders of new species have claimed the name of Chapman, as well. A beetle proudly wears, "Aenictotems Chapmani," while a fly is, "Aenctomyia Chapmani."

Silliman had reached its highest peak in enrollment and activity as one of the outstanding institutions in East Asia, when Pearl Harbor came. Every class and occupation made up its student body and all manner of religious background. Filipinos, Moros, Mohammedans, Thai, Chinese, and Igorots were on her campus. Many were taking to their own homeland the new vision of a Saviour. This beehive of school activity changed rapidly when war came, for it became the headquarters of the American Army, while faculty and students scattered everywhere. The Chapmans and the Glunzes went to a mountain area near their vacation hill station. Despite the demands of the invaders, the hill country people did not betray the secret hiding place of these missionaries. Food was generously supplied and the ties of friendship deepened at this time of uncertainty. Finally, Dr. and Mrs. Chapman were captured and taken to prison in Dumaguete and Mr. and Mrs. Glunz were also apprehended shortly afterward. The Filipinos manifested their loyalty again by urging that their missionary friends be permitted to remain in Dumaguete, even going to Cebu to plead their cause, but to no avail. Those hot days in jail were difficult ones, even for a scientist, as lice, bedbugs, and mosquitoes were worse on cold stones. At night, they had no covering and a bright light shone over them which attracted innumerable flying insects. At such times as this, the New Testament and Psalms, which Dr. Chapman had with him, brought com-

fort to him and to his fellow prisoners. The Word witnessed in their hearts, even though they sat in silence with no conversation allowed. Some of the Filipinos read this Bible for hours daily. Dr. Chapman enriched mind and heart by memorizing twenty-seven Psalms and other helpful passages.

The journey led on from Dumaguete to San Carlos, Bacolod, and to Santo Tomas Internment Camp in Manila, but the scientist always was Dr. Chapman, "in season and out of season," as they proceeded down the mountain trail after capture. Their captor, a captain, who led with a rope about Dr. Chapman's waist, was discovered to be a graduate of an agricultural college in Formosa. He discussed flowers and plants and to Dr. Chapman's question on this rugged pathway, "What is that flower?" the captain would reply, "Oh, that is so and so. We have that in Formosa." Then, in Dumaguete, his chief interpreter was a graduate of Los Banos Agricultural College (Philippines), so English was not only a common language but the language of science was a helpful medium. Later, en route to Manila, he was introduced to the Superintendent of Military Prisons, who later told him that he was a professor of Entomology in the University of Formosa. They had several conversations on insect control and pests in Formosa. This conversation led to his being freed from the rope and permitted to walk about without restraint. Science and soldiers!

During his days in internment, his service was most essential as he was entomologist for Santo Tomas Camp. He had to keep down the flies and mosquitoes, as well as watch for bugs in the drinking water. Someone has well said that, without this work, the internees would have been

destroyed by pestilence. As Associate Dean of the Internment College, he taught biology to American boys and girls. His class in nature study, for the younger ones, was almost disrupted by measles! His calm, quiet spirit was constantly helpful to the hundreds who were tense in spirit and starved in body. Faithfully, he climbed the four floors to teach daily, even though only a shadow of himself. Liberation came with such triumph and now Dr. and Mrs. Chapman are in America, regaining health to return for their last term in order that they may rebuild the work and equipment so that scientific interests may achieve even wider influence. May this "Missionary of the Microscope" be speeded on his way!

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